

### ABSTRACT

Described herein is a novel biological support for cells, derived from a mammalian whole organ, tissue or portion thereof. In various embodiments, a support matrix is prepared by isolating a whole organ, tissue or portion thereof, and thereafter converting it into a tissue powder. Various washing and freeze-drying techniques are employed, as well as mechanical reduction, sonication and further processes to convert the whole organ, tissue or portion thereof into a matrix suitable for supporting functional longevity and proliferation of cultured cells. It is believed that by culturing a particular type of cell in a matrix derived from the whole organ, tissue or portion thereof with which that cell is normally associated, one may achieve optimal cell support and differentiation. The whole organs, tissues and portions thereof used in connection with aspects of the present invention need not be decellularized or otherwise digested prior to processing into the matrix.